



HOLGUN[®]

Instruction Manual

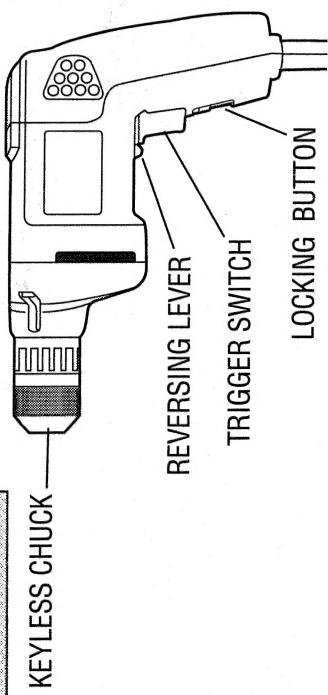
1167 • 1187 • 1313 • 1314 • 2601
VSR Drills

Getting the most out of your tool.

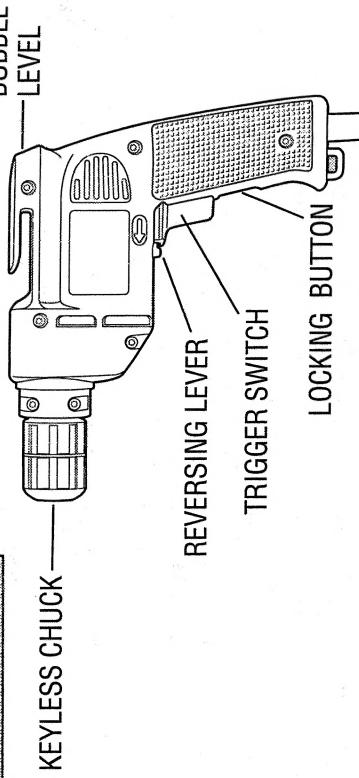
Please take time to read this manual and pay particular attention to the safety rules we've provided for your protection. Don't forget to send in your owner's registration card. If you have any questions about your tool please call:

1-800-9-BD TOOL
(1-800-923-8665)

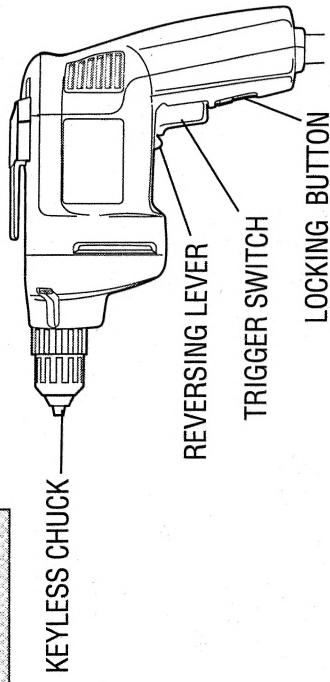
1187 3/8" VSR DRILL



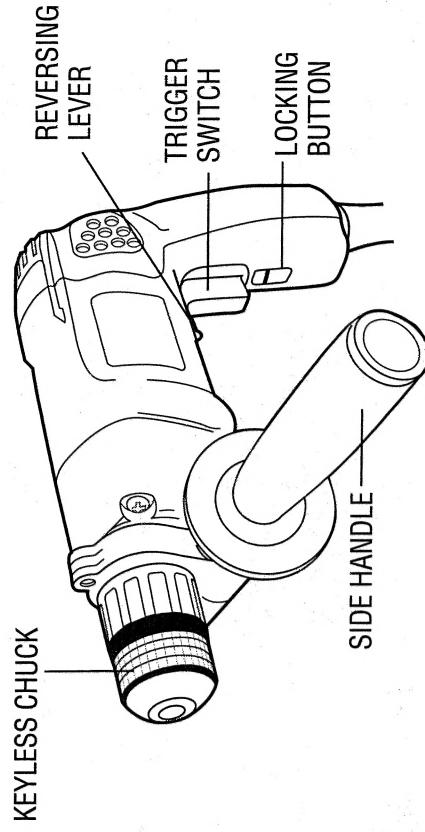
1167 3/8" VSR DRILL



2601 3/8" VSR DRILL



1313/1314 1/2" VSR DRILL



FOR YOUR SAFETY - ALL TOOLS

WARNING: When using electric tools, basic safety precautions should always be followed to reduce risk of fire, electric shock, and personal injury, including the following:

READ ALL INSTRUCTIONS.

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
 2. **CONSIDER WORK AREA ENVIRONMENT.** Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit.
 3. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example, pipes, radiators, ranges, refrigerator enclosures.
 4. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Do not let visitors contact tool.
 5. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place – out of reach of children.
 6. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
 7. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended, for example, don't use circular saw for cutting tree limbs or logs.
 8. **DRESS PROPERLY.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Non-skid footwear is recommended when working outdoors. Wear protective hair covering to contain long hair.
 9. **USE SAFETY GLASSES.** Also use face or dustmask if operation is dusty.
 10. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
 11. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
12. **DON'T OVERREACH.** Keep proper footing and balance at all times.
 13. **Maintain Tools With CARE.** Keep tools sharp and clean for better and safe performance. Follow instructions for lubricating and changing accessories. Keep handles dry, clean, and free from oil and grease.
 14. **Disconnect Tools** when not in use, before servicing, and when changing accessories.
 15. **Remove Adjusting Keys And Wrenches.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
 16. **Avoid Unintentional Starting.** Don't carry plugged in tool with finger on switch. Be sure switch is off when plugging in.
 17. **Outdoor Use Extension Cords.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
 18. **Stay Alert.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
 19. **Check Damaged Parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired by an authorized service center unless otherwise indicated in this manual. Have defective switches replaced by authorized service center. Don't use tool if switch does not turn it on and off.
 20. **Do Not Operate** portable electric tools near flammable liquids or in gaseous or explosive atmospheres. Motors in these tools normally spark, and the sparks might ignite fumes.
 21. **Caution:** When drilling into walls, floors or wherever live electrical wires may be encountered, DO NOT TOUCH THE CHUCK OR ANY FRONT METAL PARTS OF THE DRILL! Hold the drill only by the plastic handle to prevent shock if you drill into a live wire.

SAVE THESE INSTRUCTIONS FOR FUTURE USE

Double Insulation

Your unit is double insulated to permit use on non-grounded circuits. This means that it is constructed throughout with two separate layers of electrical insulation between you and the tool's electrical system.

Tools built with this insulation system are not intended to be grounded. As a result, your tool is equipped with a two prong plug which permits you to use extension cords without concern for maintaining a ground connection.

NOTE: Double insulation does not take the place of normal safety precautions when operating this tool. The insulation system is for added protection against injury resulting from a possible electrical insulation failure within the tool.

CAUTION: When servicing all tools, **USE ONLY IDENTICAL REPLACEMENT PARTS.** Repair or replace damaged cords.

Extension Cords

Double insulated tools have 2-wire cords and can be used with 2-wire or 3-wire extension cords. Only round jacketed extension cords should be used, and we recommend that they be listed by Underwriters Laboratories (U.L.) (C.S.A. in Canada). If the extension will be used outside, the cord must be suitable for outdoor use. Any cord marked as outdoor can also be used for indoor work. The letters "WA" on the cord jacket indicate that the cord is suitable for outdoor use.

An extension cord must have adequate wire size (AWG or American Wire Gauge) for safety, and to prevent loss of power and overheating. The smaller the gauge number of the wire, the greater the capacity of the cable, that is 16 gauge has more capacity than 18 gauge. When using more than one extension to make up the total length, be sure each individual extension contains at least the minimum wire size. To determine the minimum wire size required, refer to the following chart.

CHART FOR MINIMUM WIRE SIZE (AWG) OF EXTENSION CORDS

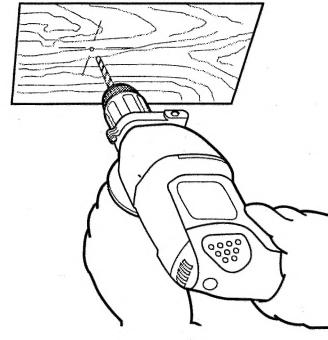
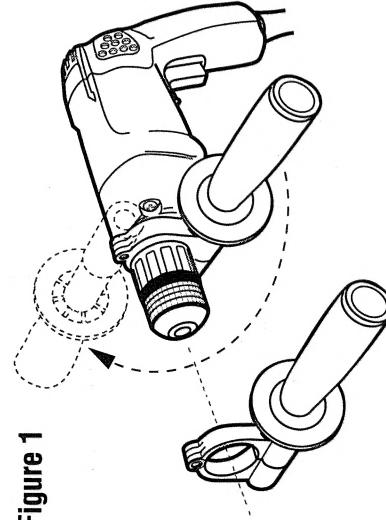
NAMEPLATE RATING-AMPS	TOTAL EXTENSION CORD LENGTH - FEET
0 - 10.0	25 50 75 100 125 150 175 200
10.1 - 13.0	18 18 16 16 14 14 12 12
13.1 - 15.0	16 16 14 14 14 12 12 12
	14 14 12 12 12 12 12 12

NOTE: Before using an extension cord, inspect it for loose or exposed wires, damaged insulation, and defective fittings. Make any needed repairs or replace the cord if necessary. B&D has extension cords available that are U.L. (C.S.A. in Canada) listed for outdoor use.

Side Handle (1313,1314)

CAUTION: Always use side handle when provided and hold drill with both hands. A side handle is supplied with all 1/2" and some 3/8" drills. In most cases, it clamps to the front of the gear case as shown in Figure 1 and can be rotated 360° to permit right or left hand use.

Figure 1



TOOL OPERATION

Switch

To start drill, depress the trigger switch, shown in Figure 2. To stop drill, release the switch. To lock the trigger switch in the ON position for continuous operation, depress the trigger switch and push up the **locking button**. The tool will continue to run. To turn the tool OFF, from a locked ON condition, squeeze and release the trigger once. Before using the tool (each time), be sure that the locking button release mechanism is working freely.

Do not lock the switch ON when drilling by hand so that you can instantly release the trigger switch if the bit binds in the hole. The locking button is for use only when the drill is mounted in a drill press stand or otherwise held stationary.

Be sure to release the locking mechanism before disconnecting the plug from the power supply. Failure to do so will cause the drill to start immediately the next time it is plugged in. Damage or injury could result.

The **variable speed trigger switch** permits speed control. The farther the trigger switch is depressed, the higher the speed of the drill.

NOTE: Use lower speeds for starting holes without a centerpunch, drilling in metal, plastics or ceramics, or driving screws. Higher speeds are better for drilling in wood and composition board and for using abrasive and polishing accessories.

The **reversing lever** is used to reverse the drill for backing out screws or jammed bits. It is located above the trigger, shown in Figure 2. To reverse the drill, turn it OFF and push the reversing lever to the left (when viewed from the chuck end). To position the lever for forward operation, turn the drill OFF and push the lever to the right.

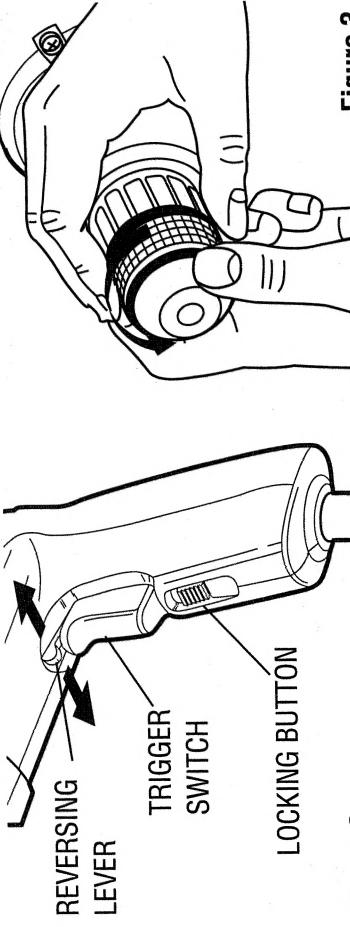


Figure 2

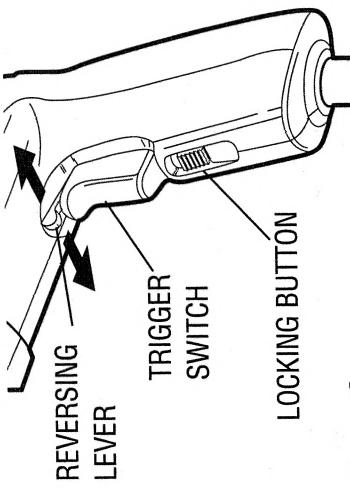


Figure 3

Your tool features a keyless chuck for greater convenience. To insert a drill bit or other accessory, follow the steps below:

1. TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.
2. Grasp the rear half of the chuck with one hand and use your other hand to rotate the front half counterclockwise, as shown in Figure 3. Rotate the chuck far enough so that the chuck opens sufficiently to accept the desired accessory.
3. Insert the bit or other accessory about 3/4" into the chuck and tighten securely by holding the rear half of the chuck and rotating the front portion in the clockwise direction.
4. To release the accessory, repeat step 2 listed above.

WARNING: Do not attempt to tighten drill bits (or any other accessory) by gripping the front part of the chuck and turning the tool on. Damage to the chuck and personal injury may result. Always turn off tool and disconnect from power supply when changing accessories.

Chuck Removal

1. TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.
2. Tighten the chuck around the shorter end of a hex key (not supplied) of $1/4"$ or greater size.
3. Using a wooden mallet or similar object, strike the longer end in the clockwise direction, as shown in Figure 4. This will loosen the screw inside the chuck.
4. Open chuck jaws fully, insert screwdriver (or Torx tool if required) into front of chuck between jaws to engage screw head.
5. Remove screw by turning clockwise (left-hand-thread).
6. Place hex key in chuck and tighten, as shown in Figure 5. Using a wooden mallet or similar object, strike key sharply in the counterclockwise direction. This will loosen the chuck so that it can be unscrewed by hand.

Chuck Installation

1. TURN OFF TOOL AND DISCONNECT FROM POWER SUPPLY.
2. Screw the chuck on by hand as far as it will go.
3. Tighten the chuck around the shorter end of a $1/4"$ or larger hex key (not supplied).

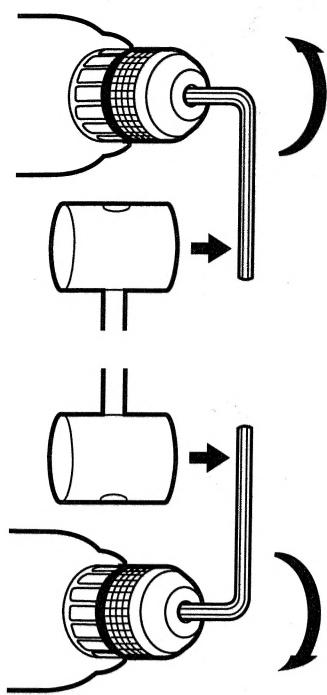


Figure 4 Figure 5

4. Strike the longer end in the clockwise direction with a wooden mallet, as shown in Figure 4. Insert and tighten the screw by turning in a counter-clockwise direction.

Drilling

1. Always turn off tool and disconnect from power supply when attaching or changing bits or accessories.
2. Use sharp drill bits only. For WOOD, use twist drill bits, spade bits, power auger bits, or hole saws. For METAL, use high speed steel twist drill bits or hole saws. For MASONRY, such as brick, cement, cinder block, etc., use carbide-tipped bits.
3. Be sure the material to be drilled is anchored or clamped firmly. If drilling thin material, use a "back-up" block to prevent damage to the material.
4. Always apply pressure in a straight line with the bit. Use enough pressure to keep the drill bit biting, but do not push hard enough to stall the motor or deflect the bit.
5. Hold tool firmly to control the twisting action of the drill.
6. **IF DRILL STALLS**, it is usually because it is being overloaded. **RELEASE TRIGGER IMMEDIATELY**, remove drill bit from work, and determine cause of stalling. **DO NOT CLICK TRIGGER OFF AND ON IN AN ATTEMPT TO START A STALLED DRILL – THIS CAN DAMAGE THE DRILL.**

7. To minimize stalling on breaking through the material, reduce pressure on drill and ease the bit through the last fractional part of the hole.
8. Keep the motor running when pulling the bit back out of a drilled hole. This will help prevent jamming.
9. With variable speed drills there is no need to center punch the point to be drilled. Use a slow speed to start the hole and accelerate by squeezing the trigger harder when the hole is deep enough to drill without the bit skipping out. Operate at full speed after starting the bit.

Drilling in Wood

Holes in wood can be made with the same twist drills used for metal. These bits may overheat unless pulled out frequently to clear chips from the flutes. For larger holes, use spade bits, power auger bits or hole saws. Work that is likely to splinter should be backed up with a block of wood.

Drilling in Metals

Use a cutting lubricant when drilling metals. The exceptions are cast iron and brass which should be drilled dry. The cutting lubricants that work best are sulphurized cutting oil or lard oil; bacon grease will also serve the purpose.

Drilling in Masonry

Use carbide tipped masonry bits at low speeds. Keep even force on the drill but not so much that you crack the brittle materials. A smooth, even flow of dust indicates the proper drilling rate.

Bubble Level (1167)

Your drill (1167 only) is equipped with a bubble level that assists you in drilling level holes. For horizontal drilling, tilt the drill up or down as required so that the bubble floats in the center of the parallel lines drawn on the glass. When the bubble is centered between the lines, as shown in Figure 6A, the drill is level. For vertical drilling, align the drill so that the bubble in the level floats in the center of the bull's eye, as shown in Figure 6B.

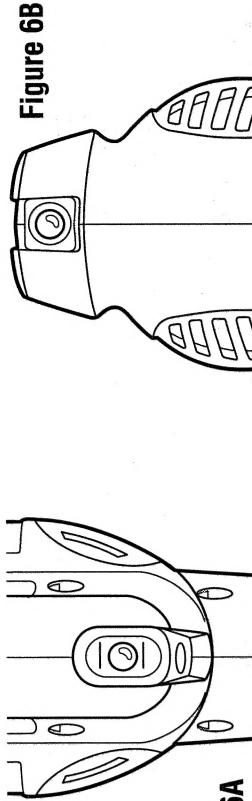


Figure 6A

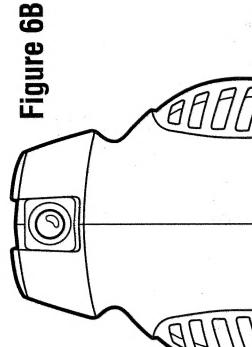


Figure 6B

MAINTENANCE

Lubrication

All ball and sleeve bearings used are factory lubricated to last the life of the bearings. All needle bearings used receive their lubrication from the grease in the gear case. Clean and relubricate gear case yearly or whenever servicing requires the gear case to be removed. Use type and quantity of grease shown on Parts Bulletin packed with your tool.

The gear case is removed by removing the three screws from the front of the tool. If the chuck is too large to permit removal of the two top screws, see instructions for chuck removal.

Motor Brushes

Your drill uses the B&D CHECKPOINT™ brush system. The tool will stop when the brushes wear out.

IMPORTANT!

To assure product safety and reliability, particularly for double insulated tools, repairs, maintenance and adjustment (excluding maintenance described in this manual) should be performed by B&D service centers or authorized service centers, using identical B&D replacement parts.

ACCESSORIES

Recommended accessories for use with your tool are available at extra cost from your distributor or local service center. A complete listing of service centers is included with your tool.

CAUTION: The use of any non-recommended accessory may be hazardous. If you need any assistance in locating any accessory call 1-800-9-BD TOOL (1-800-923-8665) or contact Black & Decker (U.S.) Inc., Consumer Services Department, 626 Hanover Pike, P.O. Box 618, Hampstead, MD 21074.

MAXIMUM RECOMMENDED CAPACITIES

Drill Capacity	1/2"	1/2"	3/8"	3/8"
RPM	0-600	0-900	0-1200	0-2500
Bits, Metal Drilling	1 1/2"	1 1/2"	3/8"	3/8"
Wood Flat Boring	1 1/2"	1 1/2"	1 1/4"	1"
Bits, Masonry Drilling	9/16"	9/16"	9/16"	1/2"
Hole Saws Wood	3 1/2"	3"	1 1/2"	1 1/8"
Hole Saws Steel	2"	1 1/2"	1 1/4"	—

ACCESSORY MUST BE RATED FOR USE AT SPEED EQUAL TO OR HIGHER THAN NAMEPLATE R.P.M. OF TOOL WITH WHICH IT IS BEING USED.

Wire Wheel Brushes	4" Diameter Maximum
Wire Cup Brushes	3" Diameter Maximum
Buffing Wheels	3" Diameter Maximum
Rubber Backing Pads	4-5/8" Diameter Maximum

CARBON REMOVING BRUSHES

Made of tempered-steel wire; used with 1/4" and 3/8" drills to remove rust and scale from metals. Leaves a burnished surface.

A. Heavy duty solid wire-filled brush.

B. Side-flare brush for close corner work.

C. Hollow-core, flare bottom brush. Small cleaning brush (not shown).

WIRE WHEEL BRUSHES

Use in cleaning and removing rust, scale, old paint. Maximum safe RPM- 5000.

WIRE CUP BRUSHES

Use in cleaning and removing rust, scale, old paint. Maximum safe RPM- 5000.

DRILL STOP

Capacity 1/4" to 1/2". Governs drilling depth. Maximum safe RPM- 5000.

WHEEL ARBORS

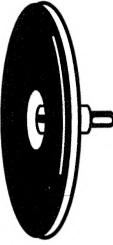
Fit 1/4" to 1/2" drills. Carry wire wheel brushes and buffering wheels.

BUFFING WHEELS

Use with 1/4" to 1/2" drills and wheel arbors. 3" x 3/8" x 1/2" cotton buff.

RUBBER BACKING PAD

Fit 1/4" to 1/2" drills. 4-5/8" rubber backing pad with plain shank. Used for sanding operations.

**SANDING DISCS**

Use with rubber backing pad.

**ROUND-SHANK MASONRY BITS**

These bits are carbide-tipped for top performance and extra long life in most masonry drilling applications.

BIT DIAMETER	USABLE DRILLING DEPTH	SHANK DIAMETER
3/16"	1-1/2"	3/16"
1/4"	2"	1/4"
5/16"	2-1/4"	1/4"
3/8"	2-1/2"	1/4"
1/2"	2-1/2"	1/4"

**One Year Service/Safety Check**

All B&D tools for Industry and Construction are covered under a service/safety check program where B&D will inspect your tool for safety and provide necessary maintenance or repairs, including normal wear and tear parts, for one year, FREE OF CHARGE.

Full Warranty

All B&D tools for Industry and Construction are warranted to be free of any defects in materials or workmanship. Upon thorough examination of tool, B&D will repair or replace, at our option, any product that is determined to be defective.

Conditions

The service/safety check and the warranty do not apply to: repairs made or attempted by anyone other than an authorized B&D service location; misuse, abuse, neglect, improper application of the tool; missing parts; or normal wear and tear (after first year of ownership). Please return the complete unit, transportation prepaid, to any B&D factory owned or B&D authorized service center location (list provided with tool or see Yellow Pages under "Tools Electric").

HIGH-SPEED HOLE SAWS (Use with mandrels)

SAW OUTSIDE DIAMETERS	FOR CONDUIT SIZES	FOR PIPE TAP SIZES
5/8"	5/8" hole saw has built in mandrel; no separate mandrel	
3/4"	3/8"	
7/8"	1/2"	3/4"
1-5/16"		
1"		
1-1/16"		
1-1/8"	3/4"	

Image

These symbols on the nameplate mean the product is listed by Underwriter's Laboratories, Inc. and certified by the Canadian Standards Association



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